

Original Research Article

Research on optimization of enterprise customer relationship management (CRM) under artificial intelligence information system

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Abstract: In the tide of digitalization, competition among various industries has shifted from product and price competition to competition for customers and service levels. High quality customer resources and good customer relationships are important guarantees for the survival and development of enterprises. Traditional customer relationship management relies on manual or simple digital tools for operation. When faced with a large amount of multi-channel and rapidly changing customer information, it lacks the ability to meet current problems such as slow customer data processing speed, insufficient customer value discovery, and similar services, which affects the level of customer management in enterprises. With the development of artificial intelligence, intelligent data analysis, automated information processing, personalized service recommendations and other applications are gradually being applied in enterprise management, achieving a breakthrough in customer relationship management. More and more enterprises are promoting the combination of customer relationship management and artificial intelligence information systems to improve customer service, solve traditional management problems, and retain customers and enhance their competitiveness in the fiercely competitive market environment.

Keywords: artificial intelligence; information system; customer relationship management; customer value

1. Introduction

Customer relationship management is an important component of business operations, which has a significant impact on customer retention and the long-term development of the enterprise. In the information age, customer information sources are becoming increasingly abundant, and customer needs are becoming more diverse and personalized. Traditional customer management methods can no longer meet the requirements of current enterprise development. However, information systems based on artificial intelligence, with their fast data processing capabilities, intelligent algorithm analysis capabilities, and 24/7 service response, can effectively solve the problems in traditional customer management and provide customers with more refined and intelligent services. This article discusses how to improve and perfect customer relationship management in the era of intelligence, based on the current problems faced by enterprises in customer management and the advantages of artificial intelligence technology. The aim is to address issues such as insufficient integration of customer data, poor business adaptability, low employee quality, and weak security protection, in order to improve customer management, enhance customer satisfaction and value, and promote long-term sustainable development of enterprises.

2. The practical value of artificial intelligence information systems in CRM

2.1. Improve the overall efficiency of customer information processing

In the long-term operation of enterprises, a large amount of personal information of customers will be generated. The data obtained through various channels such as online customer service, offline communication, and purchasing behavior are scattered and disorderly, making it difficult to unify and sort them out. Traditional customer information management mainly relies on manual labor, and staff need to spend a lot of time and energy on identifying, summarizing, and summarizing customer information. The

entire process is time-consuming and inefficient. The manual management mode is prone to operational errors or improper organization of customer information, and may also result in the loss of opportunities for customer management and marketing as some time sensitive information cannot be applied in a timely manner. Artificial intelligence information systems can independently collect customer data from multiple sources, summarize and organize it, automatically identify various types of information, and eliminate useless or repetitive parts, and consolidate scattered and chaotic information into structured and comprehensive customer data files. This is conducive to reducing manual workload, improving work efficiency and accuracy, enabling customer information to serve the company's daily work as soon as possible, and laying a good foundation for the company's customer service, marketing and other work.

2.2. Digging deeper into customer value and optimizing customer interaction experience

Customer value includes both the current exploitable consumption value and the potential for future development. Under traditional customer management methods, it is not possible to effectively identify the actual value of each customer, resulting in the company allocating customer resources equally. High quality and high-value customers cannot receive sufficient service and investment, and potential general customers cannot be discovered, resulting in a waste of customer value and idle company resources. Artificial intelligence information systems can analyze customers' comprehensive behavior trajectories based on intelligent algorithms, summarize customers' consumption habits, demand preferences, and other main attributes, accurately distinguish customers' value levels, timely discover customer groups with great development potential, help enterprises better allocate their resources, meet different customer needs in a targeted manner, maximize the utility of existing customers, and increase enterprise revenue. Moreover, traditional manual customer service methods are prone to slow response times or uneven service levels due to limited human energy and working hours. Artificial intelligence systems can be responsible for basic customer service and feedback issues 24 hours a day, recommending suitable services based on customers' past behavior, simplifying operational steps, saving waiting time, and cooperating with manual solutions to difficult problems to improve the overall customer experience, making customers feel closer to the company and increasing their sense of identification and belonging.

3. The core path of CRM optimization under artificial intelligence information system

3.1. Integrate multi-channel data resources and build a unified data base

Enterprises need to achieve data circulation between internal departments, achieve consistency and standardized management of customer information across all channels, and avoid customer data being scattered among various business departments. Centralize customer information scattered across various business modules into one platform, breaking the information silos between departments and forming a unified enterprise customer big data center. At the same time, attention should be paid to the quality control of basic data, and a large amount of duplicate, missing, or erroneous data should be cleaned and organized to ensure the authenticity and accuracy of the data entering the artificial intelligence system. Based on the dynamic changes in customer behavior, continuously update and increase customer information content to ensure the freshness and timeliness of information materials, in order to better establish customer profiles, analyze customer needs, judge customer value, and facilitate subsequent customer data analysis and related work, laying the foundation for CRM intelligence.

3.2. Optimize internal business processes and promote deep integration of technology and industry

Based on the characteristics and advantages of artificial intelligence information systems, a comprehensive review of the workflow of existing customer relationship management systems in enterprises is conducted. On this basis, complex, repetitive, or inefficient work content is eliminated or simplified, and new information flow and job responsibility allocation schemes are redesigned; Clarify the role of conclusions obtained from intelligent analysis in the entire operation process of the enterprise,

and widely apply the conclusions obtained from the system to customer discovery, daily maintenance, and customer retention work, so as to truly implement intelligence into specific work; At the same time, it is necessary to establish a regular cooperation mode between business personnel and technical personnel, where business personnel raise problems and requirements encountered in frontline work, and technical personnel adjust and improve corresponding software or functions based on these problems. Continuously optimize system functions based on actual business situations, reduce the distance between the output results of intelligent systems and the business development requirements of enterprises, and enable intelligent technological means to better meet the business needs of enterprises and effectively support the work of enterprise customer relationship management.

3.3. Establish a long-term cultivation mechanism to enhance the comprehensive literacy of personnel

Enterprises should establish a hierarchical and categorized capacity building mechanism for all relevant personnel engaged in customer relationship management, and set different levels of learning content according to different job positions. Basic training mainly teaches everyone how to use artificial intelligence information systems, enabling every employee to learn basic functions such as obtaining information, retrieving data, and viewing results, so that everyone can freely use intelligent systems to carry out daily work. Advanced training mainly aims to cultivate everyone's understanding and application ability of data. Based on the introduction of the system's analysis results, it teaches employees how to understand these data and develop reasonable customer maintenance plans and customer business strategies based on them. Based on the continuous progress of intelligent technology, a long-term plan will be made to establish a platform for mutual communication and exchange within the company, allowing employees to discuss solutions and work experience based on the problems they encounter in their work, thereby changing their original way of thinking and better adapting to the responsibilities and work styles of the customer manager role in the era of intelligence.

3.4. Establish a sound security protection system to ensure the security of customer information

Enterprises need to analyze the entire process of storing, accessing, and using customer information, establish comprehensive and normalized information security protection mechanisms, protect customer information privacy and data security, set different data access permissions according to different job responsibilities, and fundamentally prevent unauthorized access and illegal viewing of customer information. Continuously improve and perfect corresponding technologies and protective facilities, enhance the security of customer data storage, transmission, retrieval, and other aspects, regularly arrange personnel to inspect servers and other equipment, identify and solve problems that arise, and avoid threats caused by technical issues. At the same time, strengthen internal personnel management, formulate regulations on the use of customer information, strictly control employees' data access, utilization, dissemination and other behaviors, standardize personnel behavior, reduce the risk of information leakage caused by personnel operations, enhance customers' confidence in the enterprise, and ensure the stable, secure and effective operation of the enterprise customer relationship management system.

4. Implementation guarantee measures for CRM optimization plan under artificial intelligence information system

4.1. Improve organizational structure, coordinate and promote work implementation

The improvement and perfection of intelligent customer relationship management systems cannot be achieved without a reasonable organizational structure as the foundation. The company can establish a dedicated team for the construction and operation of intelligent customer relationship management, which will unify and lead all matters related to intelligent reform within the company, and participate in the system update and transformation plan, daily management, and promotion implementation throughout the process. Refine the specific job responsibilities and duties of each position, so that every staff member knows what they should do and prevents the phenomenon of mutual shirking due to unclear responsibilities.

At the same time, communicate and cooperate effectively between different departments during daily work, break down information silos and cooperation barriers between departments, and promote information sharing and business collaboration among departments. Unify the internal work progress of the enterprise, form a good situation where all departments work together, lay a solid foundation for the implementation of intelligent customer relationship management optimization plans, and promote the orderly progress of the entire enterprise's intelligent transformation.

4.2. Strengthening technical support and consolidating the foundation of system operation

Technical capability is the foundation for achieving intelligent customer relationship management, and having a good technical foundation on this basis can ensure the long-term effective operation of intelligent management systems. Enterprises should continue to increase investment in technology research and development, as well as software and hardware, for intelligent transformation. They should purchase new hardware facilities that meet the requirements of intelligent systems, improve backend operating software and technical architecture, and enhance the overall operational efficiency of the system. Actively seek cooperation with technology service companies in the industry with corresponding qualifications and rich experience, and use their professional technical strength to complete tasks such as system deployment, configuration, and daily maintenance. With the changes in the development situation of the industry and the operational status of the enterprise itself, it is necessary to timely update and improve the system and promptly address any issues that arise during its use. Continuously strengthening the integration between artificial intelligence technology and customer relationship management systems, making intelligent technology more in line with the needs of various application scenarios such as customer management, marketing operations, and customer service of enterprises, leveraging the advantages of intelligent systems, and ensuring the smooth operation of the entire system.

4.3. Building a talent team to meet the needs of intelligent operations

The implementation of intelligent customer relationship management system requires the support of highly educated and versatile talents, whose overall quality determines the effectiveness and quality of intelligent management work. Enterprises should establish a sound talent training mechanism in accordance with the requirements of their own intelligent development, and provide regular professional training for employees. The training mainly covers knowledge of intelligent system application, big data analysis, intelligent customer management, etc., so that employees can better use new management models and improve their ability to operate and manage intelligently. We also need to increase our efforts in talent recruitment, focusing on recruiting talents with digital and intelligent management capabilities, and strengthening the backbone of enterprises. By adopting a combination of internal training and external recruitment, we aim to enhance the quality of personnel in the enterprise, form a talent team with rich customer service experience and intelligent technology application capabilities, meet the operational needs of intelligent customer relationship management, and provide strong talent support for the intelligent development of the enterprise.

4.4. Establish sound management systems and funding systems to ensure long-term development

Good institutional construction and sufficient financial support are the fundamental conditions for the effective implementation and long-term operation of intelligent customer relationship management optimization solutions. Enterprises should establish a scientific, comprehensive, and unified standard system based on the characteristics of intelligent management mode, including customer data management, system maintenance, customer service provision, information security protection, employee performance evaluation, and other aspects. Using a comprehensive set of regulations to guide employee behavior and business operations, so that intelligent management has a unified standard and legal basis, to prevent management problems to a certain extent. At the same time, establish a special intelligent transformation fund, clarify the purpose of the fund, and use the funds for system upgrades, technology research and maintenance, personnel training, hardware procurement, and other aspects. Reasonably arrange the fund utilization plan, improve the efficiency of fund utilization, prevent resource idle, provide sufficient funding guarantee for the intelligent improvement of the company's customer relationship management, long-term

operation of the system, and team building, so that the intelligent improvement work can proceed smoothly and achieve results.

5. Conclusion

In the process of digital transformation, intelligent upgrading of customer relationship management is an effective way for enterprises to solve development difficulties and improve core competitiveness. Artificial intelligence information systems can greatly improve the efficiency of customer information management, discover hidden customer value, improve communication between enterprises and customers, and provide customers with a good service experience. However, many enterprises still face problems in customer relationship management, such as incomplete collection of customer information, inadequate alignment of business processes with actual situations, low proficiency of staff, and potential data security risks. By establishing a unified data platform, optimizing business processes, strengthening talent cultivation, and ensuring security, the role of intelligent technology can be better utilized to continuously improve the customer relationship management methods of enterprises, maintain good and stable customer relationships, and benefit the long-term stable development of enterprises.

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